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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,221	10/27/2003	William C. Bushong	RAYO9321.1(1580A)	9783

49376 7590 04/25/2007  
SENNIGER POWERS (RAYO)  
ONE METROPOLITAN SQUARE  
16TH FLOOR  
ST. LOUIS, MO 63102

EXAMINER
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CREPEAU, JONATHAN

ART UNIT	PAPER NUMBER
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1745

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/25/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/25/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/697,221	<b>Applicant(s)</b> BUSHONG ET AL.	
	<b>Examiner</b> Jonathan S. Crepeau	<b>Art Unit</b> 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) 39-63 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2, 7, 10, 17, 20-24, 26-28, 31-34 and 36-38 is/are allowed.
- 6) ☒ Claim(s) 3-6, 8, 9, 11-16, 18, 19, 25, 29, 30 and 35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office action addresses claims 1-63. Claims 39-63 remain withdrawn from consideration. Applicant's arguments regarding the 35 USC 102 and 35 USC 112 second paragraph rejections are persuasive and these rejections are withdrawn. Applicant further asserts that provisional application 60/421624 supports the instant claims. However, this application has been reviewed and is only believed to support claims 1, 2, 7, 10, 17, 20-24, 26-28, 31-34, and 36-38 of the instant application in the manner required by 35 USC 112 first paragraph.

Accordingly, only these claims are accorded a filing date of 10/25/02; the remainder of the claims are accorded a filing date of 10/27/03 and are thus subject to a new ground of rejection under 35 USC 103. As this ground of rejection is not considered to be necessitated by amendment, this action is non-final.

### ***Claim Rejections - 35 USC § 103***

2. Claims 3-6, 8, 9, 11-16, 18, 19, 25, 29, 30, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/35618 in view of Schubert et al (U.S. Pre-Grant Publication No. 2005/0079404).

In Figure 2A, WO '618 teaches a rechargeable battery having a can (12), a switch assembly (11) having a flexible member (22), and first and second conductive elements (26, 28). The flexible member may be made of nylon (see [0072]).

WO '618 does not expressly teach that the flexible member comprises a material having a heat deflection temperature greater than 100 C at 264 PSI and a tensile strength greater than 75 MPa, as recited in claim 1, or that the material comprises a glass-filled polyphthalamide, as recited in claims 3, 4, and 9.

Schubert et al. teach a nonaqueous battery comprising a seal member comprising glass fibers and a resin such as polyphthalamide (see [0025], [0027]). This material would inherently have a heat deflection temperature greater than 100 C at 264 PSI and a tensile strength greater than 75 MPa, as set forth in Fig. 28 of the instant application.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated by Schubert et al. to use a glass-filled polyphthalamide as the flexible member of WO '618. In [0025] Schubert et al. teach that "[t]he seal member of the invention can be used to provide an excellent compressive seal for an aperture in the cell housing and also form at least a part of a reliable pressure relief vent for the cell." Accordingly, the artisan would be motivated to use a glass-filled polyphthalamide as the flexible member of WO '618.

WO '618 further does not expressly teach that "inert" material is located in the electrode (claim 11), or that the rivet comprises a nonferrous alloy plated on steel (claim 25).

However, regarding the “inert” material recited in claim 11, this term is considered to encompass electrically conductive materials not participating in the electrode reactions. Use of these materials is well-known to increase electrical conductivity within the electrode, and the artisan would be sufficiently skilled to use an optimal amount of the material in the electrodes of WO ‘618.

Regarding claim 25, which recite that the rivet or tab comprises a plating on steel, it would be well within the skill of the art to use, for example, nickel-plated steel in the electrical contacts of WO ‘618. This material provides the advantages of steel (i.e., strength) but the nickel layer provides corrosion resistance. As such, the subject matter of claims 25 would also be rendered obvious to the skilled artisan.

### ***Double Patenting***

3. Claims 3-6, 8, 9, 11-16, 18, 19, 25, 29, 30, and 35 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-75 of U.S. Patent No. 6,878,481 in view of Schubert et al. The ‘481 patent claims do not expressly teach the properties or composition of the flexible member as recited in the instant claims. However, it would be obvious to use the glass-filled polyphthalamide disclosed by Schubert et al. as the flexible member of the ‘481 patent claims for the reasons stated above. Therefore, since such material would inherently possess the claimed properties, the instant claims are an obvious variant of the ‘481 patent claims.

***Response to Arguments***

4. Applicant's arguments filed February 13, 2007 have been fully considered as they apply to the present rejections but they are not persuasive. The arguments with regard to nylon not inherently having the claimed characteristics are persuasive. However, as set forth above, the polyphthalamide material disclosed by Schubert does inherently possess these characteristics. Applicants have attempted to antedate the Schubert reference, however, as stated above, only some of the claims are believed to be entitled to the filing date of the provisional application. Accordingly, the unsupported claims remain subject to the rejection under 35 USC 103.

***Allowable Subject Matter***

5. Claims 1, 2, 7, 10, 17, 20-24, 26-28, 31-34, and 36-38 are allowed.

6. The following is an examiner's statement of reasons for allowance:

The above-noted claims are supported by provisional application 60/421624 and are accorded a filing date of 10/25/02, thereby antedating the Schubert '404 publication. Consequently, the closest prior art is Schubert (U.S. Pre-Grant Publication No. 2001/0014419), which discloses galvanic cell seals. While the Schubert '419 publication teaches certain materials having the claimed heat deflection temperature (see Fig. 6), it does not teach that these materials also possess a tensile strength of at least 75 MPa (10,877 PSI) (see Table 7). In fact, the reference teaches that lower tensile strengths are advantageous (see [0043]). Accordingly, the subject matter defined by claim 1 patentably distinguishes over Schubert '419.

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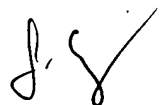
***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299.

The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (571) 272-1292. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jonathan Crepeau  
Primary Examiner  
Art Unit 1745  
April 18, 2007